Linear Function Word Problems

Name_____

1) Jimmy is having a birthday party at the zoo. The zoo has a fixed fee for birthday parties, plus a fee per person. Jimmy is told the total charge for 10 people, including himself, would be $97.50 and the total charge for 20 people, including himself, would be $175. Determine the:

   a. independent and dependent variables

   b. rate of change　　　　　　　　　　　　c. initial value

   d. the total charge for 17 people　　　　　e. the number of people who could come for $500

2) Jimmy is driving home from a vacation. His car is on cruise control so he maintains a constant speed. After 3 hours of driving, he is 740km from home. After 6 hours, he is 461km from home. Determine the:

   a. independent and dependent variables

   b. rate of change　　　　　　　　　c. initial value

   d. distance after 8 h and 15 m.　　　　e. time it will take him to get home?

3) Jimmy and Karen rented cars from the same company. The company charges an initial fee plus a charge per km. Jimmy drove 240km and was charged $59.40. Karen drove 490km and was charged $74.40. Determine the:

   a. rate of change　　　　　　　　　b. initial cost

   c. the charge after 837km　　　　　　d. the number of km you can drive for $200

4) An insurance company has an initial charge to insure jewelry, plus a charge per dollar value of the jewelry. A ring with a value of $3500 costs $189.50 to insure. A ring with a value of $5900 costs $297.50 to insure. Determine the:

a. Rate of Change

b. Initial charge

c. Cost to insure a $12 000 ring

d. The value of a ring you could insure for $100

5) A school decides to sell t-shirts to raise money. If they sell 20 shirts, they will lose$30. If they sell 100 shirts, they will make $650. Determine the:

a. rate of change

b. initial value

c. number of shirts they need to sell to break even

6) Lanny got a short term job selling computers. He is paid on commission. In order to impress customers, he bought a few nice suits. If he has $20 000 in sales, he will lose $140. If he has $30 000 in sales, he will make a $90 profit. Determine the:

a. rate of change and initial value

b. the amount he needs to sell to break even

c. The amount he needs to sell in order to make $1000 profit

Answers to Linear Function Word Problems

1) a. ind is number of people, dep is cost   b. $7.75 per person   c. $20   d. $151.75   e. 61 people

2) a. ind is time and dep is distance   b. −93km/h   c. $1019km$ d. $251.75km$ e. 10.957 hours or $10h$, $57m$, and $25s$

3) a. $0.06/km   b. $45.00   c. $95.22   d. 2583.33km

4) a. $0.045/$ b. $32   c. $572   d. $1511.11   5) a. $8.50/shirt   b. $-200   c. 24 shirts

6) a. $0.023/$, $-600   b. $26 086.96   c. $69 565.22

 Made with Infinite Algebra 1.